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# Vth International Congress Aplichem "85 International Chemistry Fair, Incheba, 1985, in Bratislava

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# Vth International Congress Aplichem '85 International Chemistry Fair Incheba 1985 in Bratislava

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The Vth International Congress APLICHEM '85 was held in Bratislava, Czechoslovakia from June 24 to 26, 1985. The primary sponsor of the Congress was the Czechoslovak Scientific and Technical Society; the organizers included the Czechoslovak Committee for Industrial Chemistry and Printing, Prague, the Slovak and Czech Central Committees for Industrial Chemistry, the Ministry of Industry for both the Czech and Slovak Socialist Republics and SLOVCHEMIA, the Trust Organization of the Slovak Chemical Industries which has its headquarters in Bratislava.

This conference was under the general auspices of INCHEBA '85 the 17th International Chemical Fair in Bratislava, which was held from June 22 to 28, 1985. While APLICHEM '85 had in its program a special exhibition, a joint event with the International Chemistry Fair INCHEBA entitled "Rationalization and Application of Plastics," was presented.

The International Congress APLICHEM '85 held at the house of the Trade Unions, had about two hundred and twenty participants from 10 countries, many from Socialist countries. The objective of the Congress was to compare the achievements and advances in Polymer Science and Technology in the world with the accomplishments and the present state of polymer science and technology in Czechoslovakia.

The scientific program of the Congress APLICHEM '85 was planned by an organizing committee headed by Michal Ilavsky and consisted of four plenary lectures and over one hundred lectures and poster presentations. On Monday morning, June 24, 1985, Michal Ilavsky, the Chairman opened the Congress and delineated its connection with the 17th International Chemical Fair. Mr. Zdenek Smely, the Vice President of the State Commission for Scientific and Technical Investment Developments of the Czechoslovak Socialist Republic, followed next by presenting his lecture entitled "Needs and Propsective of Plastics in Czechoslovakia." He gave a very interesting and up-to-date account of the production and the production capability in the plastics area in Czechoslovakia; he compared the achievements of the plastics area in Czechoslovakia and the status of plastics production and use of plastics with the production and use in the world. Czechoslovakia has developed its plastic industry significantly over the last few years; a production of 1.6 million tons of plastics per year has been reached and plastic materials are used in the amount of almost 50 kilograms for every person in Czechoslovakia per year. Mr. Z. Smely outlined additional directions for plastic development in Czechoslovakia; plans are being developed and pursued for

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[b] See also Polymer Science in Slovakia, Polymer News 9, 251, 281 (1984).

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further development of the use of plastics material in terms of volume, as well as in terms of quality.

The technical section was opened with a plenary lecture by Otto Vogl, Herman F. Mark Professor of Polymer Science, Polytechnic Institute of New York. In his lecture "New Functionalities of Polymers and Potential Properties of New Polymers," he outlined the development of polymer science in the last twenty years world wide and stressed particularly the rapid development of new polymeric materials with specific functional groups bound onto polymers; he pointed particularly to the general development of commodity plastics for long term use and special applications, specialty polymers, such as engineering plastics, and the highly sophisticated new polymer developments which are needed for specific applications in medicine and microelectronics. He specifically discussed polymeric stabilizers, ultraviolet stabilizers, antioxidant and flame retardents, the use of spacer groups in the development of new specialty polymers and the tailor making of new polymers. Professor Vogl finally discussed new polymerization techniques for the preparation of specialty polymers used for the preparation of functional polymers: group transfer polymerization, living cationic polymerization and macromolecular engineering and architecture in general.

Professor M. Raetzsch, Director of the Institute of Polymer Technology of the Academy of Sciences of the G.D.R., gave a most interesting lecture on the modification of polymers in extruders. Polymer and polymer blends with reactive group or groups that can undergo acid/base reactions are now being developed and used for the preparation of polymeric materials with stable and permanent mechanical properties. Raetzsch emphasized the increased use of extruders as reactors for polymer reactions; he discussed the use of copolymers of maleic anhydride and ethylene/vinyl acetate copolymers doped with sodium methoxide. These latter polymers are highly reactive and can be used for very various reactions in extruders; Raetzsch described particularly the use and advantages of single and double screw extruders. Dr. Ronald Konigsveld discussed the "Applicability of Polymer Thermodynamics in Practice." When results in polymerization reactions are known, and basic data have been obtained at a pilot plant scale, it is possible and desirable to utilize this data for the construction of larger pilot plants and actual production plants. Konigsveld has developed methods to predict real data for plant productions based on the fundamental data obtained from pilot plant studies. He concluded that for the foreseeable future the methods will remain semiempirical; he does not foresee a completely reliable prediction in such areas as polymer miscibility and the stability of polymer blends.

The scientific program was then divided into three divisions: Section A, methods were discussed for evaluation and testing of new polymers using physical chemical methods; it involves such methods as modification of plastics and the development of new polymers. In the scientific program of Section B, the utilization of properties of plastics and special applications were discussed, especially for engineering plastics, but also for plastics in agricultural applications, in the building industry, electrotechnology, in electronic applications, but also the use of plastic materials in medicine. Discussions were also held on the use of plastic materials in packaging technology, plastics in the building industry, plastics in health service and other specific applications for plastic materials. The Section C, was smaller and was concerned with the utilization of secondary plastics materials and recycling: Especially the collection, processing and the elimination of scrap materials played an important role as some of these materials are used in agriculture applications and in the building industry. The technical and economical aspects of plastic materials were treated in subsections which were concerned with the collection and treatment of used plastic materials; properties of secondary raw materials, were also discussed with emphasis on the processing of such materials and the design and use of specific processing devices. Evaluation of the disposal of plastic materials played an important role in this session. Questions were raised for the development of destructive methods of reclaiming plastic materials and finally, the economy and the ecology of plastic waste were discussed.

On Monday night, the plenary lecturers were invited to a dinner at one of the famous restaurants of Bratislava; Tuesday's reception was held by the organizing committee for the organizers and the main speakers at the Hall of Trade Unions. This get-together allowed the people to interact informally and to get to know each other better. The participants of the conference agreed that the Congress was well

organized and was a great success. Most of us are looking forward to coming back to Bratislava for another meeting of this kind.

*East and West* met at the bank of the Danube for INCHEBA '85, the 17th International Chemical Fair, from June 22 to 28, 1985, in Bratislava, the capital of the Slovak Socialist Republic. Over 500 exhibitors displayed and traded chemical products and chemical processes, over 200 exhibitors were from the West, nearly 100 from other socialist countries and 200 from Czechoslovakia. Exhibitors came from 25 countries and as many different languages were spoken, although, besides the Slovak and the Czech language, German was the predominant tongue. This fair in Bratislava is an excellent opportunity for exhibitors and customers to meet in a very pleasant and congenial atmosphere in the city of Bratislava which is located in the part of Europe, where Austria, Hungary and Czechoslovakia meet.

There is an increased foreign (western) participation in this International Fair. The exhibitors from the chemical, pharmaceutical, rubber, paper and cosmetic industry showed new products; the polymer industry played a predominant role. This fair is perhaps the most important exposition of this kind in any of the socialist countries, although in Hungary similar expositions have been held regularly. INCHEBA is the place where information on technical developments and new products from all over the world are discussed, exhibited and traded. The fair also stimulates meetings of mutual interest for many scientists and engineers from many countries.

This year, the scientific and technical program was especially focused on the production and utilization of plastic materials. The objective was to stimulate attempts to find solutions for such important questions as, rationalization of plastic consumption, applications of improved engineering technologies and increase in the efficiency of the production of a number of materials. The Vth International Congress of APLICHEM held an independent exhibition, entitled "Rationalization of Plastic Applications" and was organized within the framework of INCHEBA and was displayed at the Winter Stadium. The basic idea of this exhibition was to present new basic principles for finding new direction in plastic applications, to find new material and to develop new ways of energy consumptions and savings in the labor sensitive commercial production. The objective of the exhibition was also to show specific examples of the wide scope of plastics application as an important element in the production and rationalization of this vital field in the overall national (Czechoslovak) economy.

Many major multinational companies were represented at the INCHEBA exhibition. I mention only a few of the major companies from the General Federal Republic that were present: Bayer, BASF, Hoechst, Degussa, Chemische-Werke-Huls, but also E. I. DuPont de Nemours, Monsanto, Dow Chemical Company, Essochemi, Union Carbide, Rhone Poulenc, Hercules, Montedison, Mitsubishi Chemical, Akzo Chemi, CIBA-GEIGY, Shell, Sojuzchimexport, and many local firms from Czechoslovakia, Hungary, Poland and the German Democratic Republic. Particularly prominent was the Pavillion of Slovchemia, the chemical conglomerate of the Slovak Socialistic Republic.

Thousands of visitors enjoyed the atmosphere in Bratislava and the opportunity of meeting quite freely and congenially with their colleagues. Businessmen and competitors found an excellent business atmosphere, better personal relationships were developed and most people found that the city of Bratislava was an ideal place to meet, eat, discuss and do business.